



Department of Energy

Washington, DC 20585

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MEMORANDUM FOR DISTRIBUTION

FROM:

MARK B. WHITAKER, JR. *Robert J. Whitaker/for*
DEPARTMENTAL REPRESENTATIVE TO THE
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
OFFICE OF HEALTH, SAFETY AND SECURITY

SUBJECT:

Facility Representative Program Performance Indicators
Quarterly Report, October – December (4th Quarter CY2008)

Attached is the Facility Representative (FR) Program Performance Indicators Quarterly Report covering the period from October to December 2008. Data for these indicators are gathered by Field elements quarterly per DOE-STD-1063-2006, *Facility Representatives*, and reported to Headquarters program offices for evaluation and feedback to improve the FR Program. A summary of this quarter's data concluded:

76% Fully Qualified (last Quarter was 80%)
89% Staffing Level (last Quarter was 89%)
44% Time Spent in the Field (Department of Energy (DOE) goal is > 40%)
73% Time Spent in Oversight Activities (DOE Goal is > 65%)

Percentages are based on FR staffing analyses at 209 Full Time Equivalents (FTEs) and 186 FTEs actual staffing. Fully qualified FR totals for this period broken down by program were as follows: Environmental Management (EM) had 72% fully qualified, Nuclear Energy (NE) had 100% fully qualified, National Nuclear Security Administration (NNSA) had 73% fully qualified, and Science (SC) had 90% fully qualified. The DOE goal for fully qualified FRs is greater than 80%.

The overall fully qualified staffing level decrease during this reporting period is attributed to vacancies created from FR laterals, transfers, retirements, and recent promotions. Savannah River Site will host a two-week FR Functional Area Qualification training event in April 2009. The objective of this training is to assist newly hired FRs in their core qualification process. Approximately 25 FRs are expected to attend.

FR attrition for this period was nine, with four coming from EM, four from NNSA, and one from SC. This included four laterals, two retirements, and three promotions.

Current FR information and past quarterly performance indicator reports are accessible at the FR web site at [Http://www.hss.energy.gov/deprep/facrep/](http://www.hss.energy.gov/deprep/facrep/) Should you have any questions or comments on this report, please contact me or the DOE Facility Representative Program Manager, James Heffner at 202-586-3690.

Attachment



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ENVIRONMENTAL MANAGEMENT SITES

Facility Representative Program Performance Indicators (4QCY2008)

<u>Field or Ops Office</u>	<u>Staffing Analysis</u>	<u>FTEs</u>	<u>Actual Staffing</u>	<u>% Staffing</u>	<u>Attrition</u>	<u>% Core Qualified</u>	<u>% Fully Qualified</u>	<u>% Field Time *</u>	<u>% Oversight Time **</u>
CBFO	1	3	1	100	1	100	100	70	86
ID (EM)	13	12	11	85	0	82	82	43	84
OR (EM)	19	18	18	95	0	72	72	44	66
ORP	15	15	14	93	0	79	64	43	72
PPPO	6	5	5	83	0	80	80	44	70
RL	19	18	18	95	1	84	84	45	70
SPRU	1	1	1	100	0	100	0	30	80
SR	32	24	24	75	2	71	67	45	74
WVDP	2	2	2	100	0	50	50	42	70
EM Totals	108	98	94	87	4	77	72	44	72
DOE GOALS	-	-	-	100	-	-	>80	>40	>65

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** % Oversight Time includes % Field Time

EM Facility Representative (FR) Highlights:

- CBFO: A new Office of Site Operations Director was hired.
- ID (EM): A Facility and Material Disposition Project (FMDP) FR conducted an in-depth review of the contractor's management of the Occurrence Reporting and Processing System (ORPS) in response to reportable events. The FR concluded that the contents of the ORPS reports were acceptable, but the quality of the reports (i.e. meeting the requirements for timeliness, categorization, notification, and submitting ORPS reports) was deficient.
- ID (EM): A Waste Disposition Project (WDP) FR observed an improper application of Warning Tags for an emergency eyewash station that was in service. The out-of-service unit was adjacent to the in-service unit. On the following day, the FR noted the incorrect tag had been removed from the in-service eyewash station and a new tag had been placed on the out-of-service unit. However, the new Warning Tag stated it was for a portable ladder.
- ID (EM): A WDP FR observed a system engineer performing work on an excavator without appropriate measures being taken for the fall and slip hazards. Upon investigation into the activity, it was determined work control had not evaluated the fall hazard for the work being performed. Furthermore, the work supervisor believed that the work was exempt because the excavator was a piece of mobile equipment.
- ID (EM): At the request of WDP management, an FMDP FR lead a For Cause Review Team following a heat stress event at the Advanced Mixed Waste Disposal Project. The For Cause Review Team identified multiple weaknesses in the contractor's heat stress program, including a failure to routinely assess heat stress program effectiveness.
- ID (EM): During a review of operator logs for the Advanced Mixed Waste Treatment Facility Supercompactor, an FR noted numerous instances where the Criticality Incident Detection and Alarm System daily surveillance requirement was completed past the maximum allowable nominal frequency of 24 hours without appropriate documentation in the logs.
- OR (EM): Building 3019 FRs have been providing input to the major design efforts currently occurring with the 3019 U233 Disposition Project. These include facility modifications associated with GC-1 (U233 Downblend) and new facility construction associated with GC-2 (Treatment). General process flow associated with material dissolution, down-blending, concentration, evaporation, precipitation, drying, and packaging were reviewed.
- OR (EM): The TWPC continued Contact Handled (CH) and Remote Handled (RH) TRU operations. CH TRU waste continued to be worked in the Box Breakdown Area. Non-destructive examination of CH TRU continued. Efforts continued in making repairs to the non-destructive assay (NDA) system. Hot Cell waste removal and repackaging continued on the fourth pre-1979 cask.

- OR (EM): TSCAI continues to burn solid and liquid waste. Operators performed solid repack at the K-1423 repack facility. Maintenance mechanics completed installing the new purge line and repaired sump 607 level indicator. Operations personnel completed a validation walkthrough of the draft Feed TANK Transfer procedure. The walkthrough was to verify controls in the new Safety Analysis Document were properly flowed down.
- ORP: An FR determined that Bechtel National, Inc. (BNI) could improve life safety by conducting periodic documented qualitative emergency lighting performance tests commensurate with facility configuration changes in all Waste Treatment Plant (WTP) facilities. This improvement to life safety during construction was considered to be an observation.
- ORP: An FR found inadequate monitoring of a newly installed waste transfer leak detection system. Contractor corrective action included formalizing the use of the system.
- ORP: An FR identified and resolved inadequate notification by the shift manager of a possible significant operational event.
- ORP: An FR identified during field observations at Pretreatment Engineering Platform (PEP) that general safety and health controls are lacking. This resulted in enhanced controls at PEP, through worker training and procedural implementation.
- ORP: An FR identified during field observations at PEP that the contractor has not identified all assessment tracking system items associated with PEP activities and reviewed them to validate their completion prior to simulant testing. The corrective action resulted in the project including a review of open issues in the prestart checklist for simulant testing.
- ORP: An FR identified during field observations at PEP that Conduct of Operations (ConOps) principles need to be enforced. ConOps expectations need to be communicated with crews. Policies such as allowing operators to make on-the-spot changes to procedures while operating the PEP reinforce bad ConOps practices. This resulted in a ConOps improvement plan which instituted mentor oversight at the PEP. In addition, management briefed the crews and staff of ConOps expectations.
- ORP: An FR identified during field observations that noise monitoring was not being conducted during hoisting and rigging operations as required by the worksite hazards analysis (WHA). Training was administered on strict compliance with the WHA.
- ORP: An FR identified personnel walking up the slope of a waste transfer beam contrary to postings prohibiting such activity. Training highlighting this prohibition was incorporated into annual tank farm orientation training for all tank farm workers.
- RL: All three FR vacancies have been filled with two FRs reporting onboard this period. The last is anticipated to report in February 2009. One FR took a different position within RL at the end of this reporting period.
- RL: An FR identified fall protection issues at 100N D4 project related to lack of inspection of anchor points, lack of presence of a safety monitor when required, and improper use of self-retracting lifelines.
- RL: An FR identified inadequate establishment of ConOps protocols during operation of a groundwater pump and treat facility in the construction phase.
- RL: An FR identified issues at 100K (K Basins) project that lead to a positive Unreviewed Safety Question (USQ).
- RL: An FR identified lack of configuration and hazardous energy control at Waste Encapsulation and Storage Facility (WESF).

- RL: An FR participated in the broad "assessment" of contractor transition, monitoring of personnel and operational safety, and procedural compliance.
- RL: An FR performed a reactive surveillance at WESF on configuration and hazardous energy control.
- RL: An FR performed oversight of glovebox equipment removal at Plutonium Finishing Plant (PFP).
- SPRU: Site interim qualification has been granted and SPRU site specific training is underway.
- SPRU: The FR lead a SPRU Field Office self assessment and a Readiness Surveillance for the Land Remediation project identifying work planning and procedure implementation weaknesses.
- SR: Assistant Manager for Nuclear Materials Stabilization Project (AMNMSP) FRs supported review and implementation of a K Area Complex DSA revision to support accelerated de-inventory of Hanford.
- SR: Assistant Manager for Waste Disposition Project (AMWDP) FRs completed a readiness validation to support start-up and operation of the Tank-19 Mechanical Waste Removal System. Additionally, around the clock field presence was maintained during initial operations.
- SR: AMWDP FRs oversaw re-start of Saltstone facility with revised TSR and feed stock containing low levels of organic material.
- SR: An Assistant Manager for Closure Project (AMCP) FR observed a vendor retrieve an instrument from an energized 480 volt panel and open another without the required PPE and contrary to the posted Arc Flash label.
- SR: An AMCP FR observed operations and maintenance personnel breaking the plane of a permit required confined space without an approved permit and hazard controls in place.
- SR: An AMNMSP FR participated in an Independent Technical Project Review for the Pit Disassembly and Conversion Facility (NNSA Facility).
- SR: During this reporting period one FR retired, one FR was promoted, and one vacancy was filled this period. Personnel actions are nearing completion to fill the remaining vacancies.
- WVDP: Conducted the Annual Freeze Protection surveillance, and was a member of the team that audited the Environmental Programs.
- WVDP: Conducted three monthly FR surveillances focused on seasonal preparation, maintenance activities, and ConOps; supported questions from EM-62 and requests from EM-3.3.
- WVDP: Initiated the site's Green Team in response to the July 7, 2008 OPM "Human Capital Flexibilities to Reduce Fuel Consumption" memo and to introduce and follow through with green initiatives.

NUCLEAR ENERGY, SCIENCE, AND TECHNOLOGY

Facility Representative Program Performance Indicators (4QCY2008)

<u>Field or Ops Office</u>	<u>Staffing Analysis</u>	<u>FTEs</u>	<u>Actual Staffing</u>	<u>% Staffing</u>	<u>Attrition</u>	<u>% Core Qualified</u>	<u>% Fully Qualified</u>	<u>% Field Time *</u>	<u>% Oversight Time **</u>
ID (NE)	11	11	11	100	0	100	100	48	81
NE Totals	11	11	11	100	0	100	100	48	81
DOE GOALS	-	-	-	100	-	-	>80	>40	>65

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** % Oversight Time includes % Field Time

NE Facility Representative (FR) Highlights:

- ID (NE): An Advanced Test Reactor (ATR) Complex FR noted on a work planning document the potential for an unmitigated radiological hazard and communicated such to the contractor's engineering management who determined that including a representative of radiological controls in work planning was appropriate.
- ID (NE): An FR for National Security Programs identified safety issues at the National Security Test Range (NSTR) including: failure to provide required audible warnings before explosive tests; unqualified personnel performing welding; unsafe elevated working surfaces; lack of an exposure assessment for silica; and, poor personal lifting practices.
- ID (NE): An FR for the Research and Education Campus (REC) laboratories identified that a contractor's change in R&D work control document review periodicity from one year to every five years, might not be effective in preventing scope creep or addition of unmitigated hazards.
- ID (NE): An FR for the Site Wide Complex (SWC) identified discrepancies in out-of-service equipment identification, logging, and tagging that resulted in the status of facility equipment not being accurately recorded.
- ID (NE): An FR for the Specific Manufacturing Capability (SMC) project discovered that several Work Group Representatives had signed for accepting the boiler repair lockout/tagout, and had started work on the boiler, without performing the required zero energy checks.
- ID (NE): An REC FR discovered that during a period when pH Effluent Monitoring System was functionally degraded, operating personnel were not provided current training or written guidance regarding their required response to system upsets. A high or low pH event could have resulted in a release of abnormally acidic or basic discharges to the city waste systems and a Wastewater Permit violation.
- ID (NE): The Materials and Fuels Complex (MFC) FRs identified issues involving testing of a system without proper controls and without notifying affected facilities, and a failure to control potential hazardous waste in accordance with the Resource Conservation and Recovery Act (RCRA) regulations.
- ID (NE): The National Security Programs FR identified inconsistencies in the application of training and qualification for Heavy Equipment Operators between INL work organizations.

NATIONAL NUCLEAR SECURITY ADMINISTRATION SITES

Facility Representative Program Performance Indicators (4QCY2008)

<u>Site Office</u>	<u>Staffing Analysis</u>	<u>FTEs</u>	<u>Actual Staffing</u>	<u>% Staffing</u>	<u>Attrition</u>	<u>% Core Qualified</u>	<u>% Fully Qualified</u>	<u>% Field Time *</u>	<u>% Oversight Time **</u>
LASO	14	14	12	86	0	67	50	48	77
LSO	10	10	8	80	2	100	75	46	76
NSO	8	8	9	112	0	78	78	50	69
PXSO	10	10	9	90	0	90	80	46	70
SRSO	4	4	4	100	0	75	50	41	70
SSO	11	11	8	73	2	100	75	34	72
YSO	12	11	11	92	0	91	91	47	66
NNSA Totals	69	68	61	88	4	86	73	45	72
DOE GOALS	-	-	-	100	-	-	>80	>40	>65

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NNSA Facility Representative (FR) Highlights:

- LASO: Two FRs reported for duty during this quarter raising the number of staffed FRs from 10 to 12. At the close of this reporting period all 14 FR slots were encumbered. One FR has returned from an extended detail to DOE-HQ and is now on a 120-day detail in the LASO National Security Missions office. Another FR is detailed-out as the Readiness Program Manager. Neither of these FRs are included in the on-board count.
- LASO: An FR assessed implementation of Conduct of Operations (ConOps) Chapter 8 for the TA55 Plutonium Facility.
- LASO: An FR completed a TA-54 Area G/RANT Chapter 8 ConOps assessment.
- LASO: An FR contributed to the LASO Waste Operations QA assessment.
- LASO: An FR identified deficiencies in new heated TRU waste storage container installation.
- LASO: An FR observed maintenance personnel using an eight foot pipe to mechanically agitate the Building 450 Fire Protection System (FPS) into alignment during check valve replacement. This lead to an ORPS Management Concern and required performance of the Seismic In Service Inspection for the FPS in order to return the system to operable.
- LASO: An FR spearheaded the Los Alamos Site Office Material Disposal Area (MDA) B Documented Safety Basis review team's tour and lessons learned review of the Idaho Cleanup Project's Accelerated Retrieval Project (ARP). The FR authored a white paper on the lessons learned from the ARP, with emphasis on those attributes applicable to the proposed Material Disposal Area B remediation. The FR also reviewed the Safety Evaluation Report for the MDA B Documented Safety Analysis.
- LASO: Two FRs reviewed and commented on the TA55 Plutonium Facility 2008 Documented Safety Analysis (DSA) and Technical Safety Requirements (TSRs) Submittal.
- LSO: FR Program attrition was two during this reporting period as one FR took a position within the Livermore Site Office and one FR accepted a position with the Berkeley Site Office.
- LSO: One LSO FRs supported the review of a DSA/TSR annual update.

- LSO: The FR Program was assessed during the CDNS biennial review of LSO. This review concluded that the LSO FR Program met the objective and all CRADs that were assessed.
- LSO: The FR Program was assessed during the NNSA RA for the National Ignition Facility. This RA did not identify issues associated with the LSO FR Program.
- LSO: Two FRs provided oversight of a contractor RA for the Tritium Science Station.
- NSO: An FR coordinated and finalized work control improvements at the Nevada Site Office. During this reporting period NSO FRs served on an Operational Readiness Review of a recently re-categorized nuclear hazard category III facility.
- NSO: FRs continued to maintain qualifications and proficiencies as emergency management drill and exercise controllers and evaluators, assisting the NSO Emergency Management Functional Area Manager and supplementing contractor staff in running complex exercises at Emergency Response venues as needed. During this quarter, no emergency management exercises were conducted.
- NSO: The NSO FR Group continued to implement the continuing training program. FRs were assigned responsibility for providing continuing training topics per an established schedule, and can either develop and present the training themselves or utilize a subject matter expert.
- NSO: The NSO FRG continued with a pilot program, being executed during FY2008, to shadow M&O contractor performed assessments as per DOE P 226 and the most current DOE O 226 per the expectations of Field Element Managers for Line Oversight and Contractor Assurance Systems (LO/CAS) programs. Shadow assessment criteria have been developed based upon DOE G 414.1-1B.
- PXSO: Four PXSO Facility Representatives completed requalification during this reporting period.
- PXSO: The selection process has been completed to fill the current FR vacancy; however, an offer cannot be made until an existing hiring freeze is lifted.
- SRSO: One FR passed the qualification examination and is currently preparing for an oral board evaluation.
- SSO: An FR attended the 2008 Training, Research, and Test Reactor conference.
- SSO: An FR observed an Assist Visit by the Institute of Nuclear Power Operations (INPO) at TA-V.
- SSO: An FR reviewed the planning and observed neutron radiography of spare fuel elements.
- SSO: An FR was interviewed during NNSA Sandia Pulsed Reactor Facility/Critical Experiment ORR and observed performance demonstrations.
- SSO: During this reporting period, one FR has retired and one FR accepted a new position with the Sandia Site Office in project management.
- SSO: FRs were interviewed and participated on facility tours for the CDNS bi-annual review.
- YSO: An FR applied continual pressure to repair the 9212 Breathing Air System. As a result, the system has now successfully operated in sub-freezing weather on numerous occasions since early December to support maintenance, production, and modernization work.

- YSO: An FR noted a relief valve, on a compressor, rated higher than the maximum allowable working pressure (MAWP) for a newly installed large Argon reservoir. This issue was raised to the contractor for evaluation and triggered further contractor evaluations of relief valves of all new equipment procured for the project. In addition to this relief valve being replaced, with one rated below the tank MAWP, the contractor review found several other relief valves that were not properly rated for the service for which they were to be utilized. The Contractor then contacted the equipment vendor and asked them to review their strategy policy for relief valves installed on this equipment order. The vendor also found an additional relief valve not proper for the installation. All improper valves were replaced.
- YSO: An FR prevented a Safety Basis Supplement (SBS) violation for the Potable Water Upgrade Project by reviewing and requiring changes to an issued Standing Order, for fire system freeze protection, before the B&W implemented the Standing Order.
- YSO: Two FRs completed final qualification, and one FR cross-qualified for another group of facilities.

OFFICE OF SCIENCE SITES

Facility Representative Program Performance Indicators (4QCY2008)

<u>Area/Site Office</u>	<u>Staffing Analysis</u>	<u>FTEs</u>	<u>Actual Staffing</u>	<u>% Staffing</u>	<u>Attrition</u>	<u>% Core Qualified</u>	<u>% Fully Qualified</u>	<u>% Field Time *</u>	<u>% Oversight Time **</u>
AMES	1	1	1	100	0	100	100	28	80
ASO	5	4	4	80	0	100	100	22	80
BHSO	4	4	4	100	1	100	75	50	68
FSO	2	2	2	100	0	100	100	36	74
OR (SC)	5	5	5	100	0	80	80	37	72
PNSO	4	4	4	100	0	100	100	40	73
SC Totals	21	20	20	95	1	95	90	37	74
DOE GOALS	-	-	-	100	-	-	>80	>40	>65

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** % Oversight Time includes % Field Time

SC Facility Representative (FR) Highlights:

- BHSO: Due to the close working relationship between SC and EM at BHSO, and a static EM work load, field time and oversight time associated with FRs covering EM work (i.e., EM FRs) were included in the SC performance indicators. However, EM work (and EM oversight) at BNL has been steadily increasing. Due to this increase and the recent hiring of additional EM FRs, FR performance indicators will be reported separately for SC and EM beginning the first quarter CY2009 reporting period.
- BHSO: The number of SC FRs decreased from five to four. The reduction was due to one SC FR being promoted to the BHSO Deputy Manager position and relinquishing her FR duties.
- FSO: FRs performed a site-wide review of the Laboratory's Fall Protection Program.
- FSO: FRs were involved in various activities that included planning and preparation for the Office of Science Accelerator Safety Workshop, Accelerator Safety Review, and the Nuclear Material Self-Assessment and Review.
- OR (SC): A coordinated assessment was conducted of the maintenance programs at the ORNL nuclear facilities and the SNS. This assessment was completed by the FRs at their respective facilities, and an overall assessment report was prepared.
- OR (SC): During the quarter 86 FR walkthroughs were conducted and documented in the ORION tracking system. Thirteen of these walkthroughs were conducted jointly with ES&H subject matter experts.
- OR (SC): The ORNL Site Office completed the corrective action plan in response to the HSS review at ORNL.
- PNSO: An FR completed a surveillance report on Combustible Loading in the 325 Building. This surveillance resulted in one finding and two observations.
- PNSO: An FR discovered an inadequate lockout/tagout boundary during the walkdown of an active job at PDLW. The contractor stopped work, established an appropriate boundary, and appropriately reported the event via ORPS. Corrective actions continue.
- PNSO: An FR followed contractor response to an electrical shock at the Marine Sciences Laboratory. Contractor actions were proactive in troubleshooting and correcting intermittently exposed 480VAC internal heat pump conductors that resulted from a manufacturing defect. No injuries occurred. FR involvement resulted in contractor medical evaluation policies being followed and more timely ORPS reporting.

- PNSO: An FR followed the contractor management startup review and initial operations of the Pretreatment Engineering Platform activities at the Process Development Laboratory West. FR concerns resulted in a more significant review of steam operations and changes in several operating practices.
- PNSO: FRs continued monitoring construction activities for the buildings comprising the Physical Sciences Facility.
- PNSO: While touring a radiological area in the 325 Building, an FR observed a researcher using improper radiological control practices while working inside a contamination area. Discussion with contractor staff resulted in coaching of the researcher on proper radiological control techniques.